

What is claimed is:

1 1. A method for analyzing process data, said method comprising:
2 displaying said process data in a first image, said first image representing
3 first and second dimensions associated with said process data;

4 displaying said process data in a second image, said second image
5 representing a third dimension associated with said process data;

6 receiving a region of interest (ROI) selected from one of said first image
7 and said second image, wherein said ROI can be from said first image or from said
8 second image;

9 calculating a first subset of said process data, said first subset comprising
10 values present in said selected ROI; and

11 redrawing one of said first image and said second image based upon said
12 first subset of said process data, wherein said first image is redrawn if said ROI is from
13 said second image and said second image is redrawn if said ROI is from said first image.

1 2. The method for analyzing process data of claim 1, wherein one of
2 said first, second, and third dimensions comprising at least one of a process dimension, a
3 time dimension, and a type of procedure dimension.

1 3. The method for analyzing process data of claim 1, said first image
2 and said second image each comprising at least one of a two-dimensional map and a one-
3 dimensional graph.

1 4. The method for analyzing process data of claim 1, said first image
2 and said second image comprising a first two-dimensional map and a second two
3 dimensional map indicating four-dimensional data.

1 5. The method for analyzing process data of claim 1, said first image
2 and said second image each comprising a 2D-scatter graph indicating a distribution of
3 said process data.

1 6. The method for analyzing process data of claim 5, said one-
2 dimensional graph comprising at least one of a bar graph and a line graph.

1 7. The method for analyzing process data of claim 1, further
2 comprising indicating at least one correlation between said three dimensions using a third
3 image.

1 8. The method for analyzing process data of claim 7, further
2 comprising displaying at least two of said first image, said second image and said third
3 image on a computer screen.

1 9. A method for analyzing clinical pathways, said method
2 comprising:

3 providing a two dimensional presentation of clinical data and a one
4 dimensional presentation of said clinical data, thereby enabling visualization of said
5 clinical data in at least one of three or more dimensions, including a patient dimension, a
6 time dimension, and a procedure dimension;

7 receiving a selection of a region of interest (ROI), said selection from at
8 least one of said two dimensional presentation and said one dimensional presentation,
9 wherein said ROI can be from said two dimensional presentation or from said one
10 dimensional presentation;

11 calculating a first subset of said process data, said first subset comprising
12 values present in said ROI along at least one of said three dimensions; and

13 redrawing one of said two dimensional presentation and said one
14 dimensional presentation based upon said first subset of said process data, wherein said
15 two dimensional presentation is redrawn if said ROI is from said one dimensional
16 presentation and said one dimensional presentation is redrawn if said ROI is from said
17 second presentation.

1 10. The method for analyzing clinical pathways of claim 9, said two
2 dimensional presentation comprising a map.

1 11. The method for analyzing clinical pathways of claim 9, said one
2 dimensional presentation comprising a graph.

1 12. A computer program product for analyzing process data, said
2 computer program product comprising:
3 code that displays said process data in a first image, said first image
4 representing first and second dimensions associated with said process data;
5 code that displays said process data in a second image, said second image
6 representing a third dimension associated with said process data;
7 code that receives a region of interest (ROI) selected from one of said first
8 image and said second image, wherein said ROI can be from said first image or from said
9 second image;
10 code that calculates a first subset of said process data, said first subset
11 comprising values present in said ROI along at least one of said three dimensions;
12 code that redraws said first image based upon said first subset of said
13 process data if said ROI is from said second image;
14 code that redraws said second image based upon said first subset of said
15 process data if said ROI is from said first image; and
16 a computer readable storage device for containing the codes.

1 13. An apparatus for analyzing process data, said apparatus
2 comprising:
3 a processor,
4 a display device,
5 a persistent storage, and
6 a bus, said bus interconnecting said processor, said display device and said
7 persistent storage, wherein said processor:
8 displays said process data in a first image, said first image representing
9 first and second dimensions associated with said process data;
10 displays said process data in a second image, said second image
11 representing a third dimension associated with said process data;
12 receives a region of interest (ROI) selected from one of said first image
13 and said second image, wherein said ROI can be from said first image or from said
14 second image;
15 calculates a first subset of said process data, said first subset comprising
16 values present in said ROI along at least one of said three dimensions; and

17 redraws one of said first image and said second image based upon said
18 first subset of said process data, wherein said first image is redrawn if said ROI is from
19 said second image and said second image is redrawn if said ROI is from said first image.

1 14. An apparatus for analyzing process data, said apparatus
2 comprising:

3 means for displaying said process data in a first image, said first image
4 representing first and second dimensions associated with said process data;

5 means for displaying said process data in a second image, said second
6 image representing a third dimension associated with said process data;

7 means for receiving a region of interest (ROI) selected from one of said
8 first image and said second image, wherein said ROI can be from said first image or from
9 said second image;

10 means for calculating a first subset of said process data, said first subset
11 comprising values present in said ROI along at least one of said three dimensions; and

12 means for redrawing one of said first image and said second image based
13 upon said first subset of said process data, wherein said first image is redrawn if said ROI
14 is from said second image and said second image is redrawn if said ROI is from said first
15 image.

1 15. A system for analyzing process data, said system comprising:

2 a database server,

3 an application client, in communication with said application server,

4 an application server, in communication with said application server and
5 said application client; wherein

6 said application server abstracts said process data stored in said database
7 server into at least three dimensions and forwards said abstracted process data to said
8 application client; and wherein

9 said application client provides a plurality of images, including a first
10 image and a second image, said plurality of images enabling visualization of said process
11 data in at least one of said three dimensions; wherein at least one correlation between at
12 least two of said three dimensions is indicated using said first image and a quantity
13 measure in at least one of said three dimensions is indicated using said second image; and
14 wherein

15 said application client receives a selection of at least one region of interest
16 (ROI) selected from one of said first image and said second image, wherein said ROI can
17 be from said first image or from said second image; and wherein

18 said application client calculates a first subset of said process data, said
19 first subset comprising values present in said ROI along at least one of said three
20 dimensions; and wherein

21 said application client redraws at least one of said first image and said
22 second image based upon said first subset of said process data, wherein said first image is
23 redrawn if said ROI is from said second image and said second image is redrawn if said
24 ROI is from said first image.

1 16. A method for analyzing process data, said method comprising:
2 abstracting said process data into at least three dimensions;
3 providing a plurality of visualization devices, including a first visualization
4 device and a second visualization device, said plurality of visualization devices enabling
5 visualization of said process data in at least one of said three dimensions;

6 indicating at least one correlation between at least two of said three
7 dimensions in said first visualization device;

8 indicating a quantity measure by at least one of said three dimensions in
9 said second visualization device;

10 receiving a selection of at least one of a plurality of regions of interest
11 (ROI), said selection from at least one dimension chosen from among said three
12 dimensions, said selection indicated on at least one of said first visualization device and
13 said second visualization device, wherein said ROI can be from said first visualization
14 device or from said second visualization device;

15 calculating a first subset of said process data, said first subset comprising
16 values present in said ROI; and

17 redrawing said first visualization device if said ROI is from said second
18 visualization device and redrawing said second visualization device if said ROI is from
19 said first visualization device.

1 17. The method of claim 16 further comprising:
2 receiving a second selection of at least one of said plurality of regions of
3 interest (ROI), said second selection from at least one dimension chosen from among said
4 three dimensions, said second selection indicated on at least one of said first visualization
5 device and said second visualization device;

6 calculating a second subset of said process data, said second subset
7 comprising values present in said second selection of at least one of said plurality of
8 regions of interest along at least one of said three dimensions; and

9 displaying said first subset of said process data and said second subset of
10 said process data together using at least one of said first visualization device and said
11 second visualization device.

1 18. A method for analyzing process data, said method comprising:
2 abstracting said process data into at least three dimensions;
3 providing a plurality of visualization devices, including a first visualization
4 device and a second visualization device, said plurality of visualization devices enabling
5 visualization of said process data in at least one of said three dimensions;

6 indicating at least one correlation between at least two of said three
7 dimensions in said first visualization device;

8 indicating a quantity measure by at least one of said three dimensions in
9 said second visualization device;

10 receiving a selection of at least one of a plurality of regions of interest
11 (ROI), said selection from at least one dimension chosen from among said three
12 dimensions, said selection indicated on at least one of said first visualization device and
13 said second visualization device, wherein said ROI can be from said first visualization
14 device or from said second visualization device;

15 calculating a first subset of said process data, said first subset comprising
16 values present in said ROI; and

17 redrawing said first visualization device if said ROI is from said second
18 visualization device and redrawing said second visualization device if said ROI is from
19 said first visualization device.

1 19. The method of claim 18 further comprising:
2 receiving a second selection of at least one of said plurality of regions of
3 interest (ROI), said second selection from at least one dimension chosen from among said
4 three dimensions, said second selection indicated on at least one of said first visualization
5 device and said second visualization device;

6 calculating a second subset of said process data, said second subset
7 comprising values present in said second selection of at least one of said plurality of
8 regions of interest along at least one of said three dimensions; and

9 applying a function to said first subset of said process data and said second
10 subset of said process data, yielding a third subset of said process data; and

11 displaying said third subset of said process data together using at least one
12 of said first visualization device and said second visualization device.

1 20. A method for analyzing process data, said method comprising:
2 abstracting said process data into at least three dimensions;
3 providing a plurality of visualization devices, including a first visualization
4 device and a second visualization device, said plurality of visualization devices enabling
5 visualization of said process data in at least one of said three dimensions;

6 indicating at least one correlation between at least two of said three
7 dimensions in said first visualization device;

8 indicating a quantity measure by at least one of said three dimensions in
9 said second visualization device;

10 receiving a selection of at least one of a plurality of regions of interest
11 (ROI), said selection from at least one dimension chosen from among said three
12 dimensions, said selection indicated on at least one of said first visualization device and
13 said second visualization device;

14 calculating a first subset of said process data, said first subset comprising
15 values present in said ROI; and

16 redrawing at least one of said first visualization device and said second
17 visualization device based upon said first subset of said process data, wherein said first
18 visualization device is redrawn if said ROI is from said second visualization device and
19 said second visualization device is redrawn if said ROI is from said first visualization
20 device.

1 21. The method of claim 20 further comprising displaying at least one
2 of a plurality of categorizations of at least one of said three dimensions of said process
3 data in at least one of said first visualization device and said second visualization device.

1 22. A method for analyzing process data, said method comprising:
2 abstracting said process data into at least three dimensions;
3 providing a plurality of visualization devices, including a first visualization
4 device and a second visualization device, said plurality of visualization devices enabling
5 visualization of said process data in at least one of said three dimensions;
6 indicating at least one correlation between at least two of said three
7 dimensions in said first visualization device;
8 indicating a quantity measure by at least one of said three dimensions in
9 said second visualization device;
10 receiving a selection of at least one of a plurality of regions of interest
11 (ROI), said selection from at least one dimension chosen from among said three
12 dimensions, said selection indicated on at least one of said first visualization device and
13 said second visualization device;
14 calculating a first subset of said process data, said first subset comprising
15 values present in said ROI;
16 receiving a second selection of at least one of said plurality of regions of
17 interest (ROI), said second selection from at least one dimension chosen from among said
18 three dimensions, said second selection indicated on at least one of said first visualization
19 device and said second visualization device;
20 calculating a second subset of said process data, said second subset
21 comprising values present in said second selection of at least one of said plurality of
22 regions of interest along at least one of said three dimensions;
23 applying a function to said first subset of said process data and said second
24 subset of said process data, yielding a third subset of said process data; and
25 displaying said third subset of said process data together using at least one
26 of said first visualization device and said second visualization device,
27 said function comprising at least one of an addition, a subtraction, a
28 multiplication, an exponentiation, a division, a root, a boolean operator, a modulo, and an
29 absolute value.

1 23. A method for analyzing process data, said method comprising:
2 abstracting said process data into at least three dimensions;
3 providing a plurality of visualization devices, including a first visualization
4 device and a second visualization device, said plurality of visualization devices enabling
5 visualization of said process data in at least one of said three dimensions;
6 indicating at least one correlation between at least two of said three
7 dimensions in said first visualization device;
8 indicating a quantity measure by at least one of said three dimensions in
9 said second visualization device;
10 receiving a selection of at least one of a plurality of regions of interest
11 (ROI), said selection from at least one dimension chosen from among said three
12 dimensions, said selection indicated on at least one of said first visualization device and
13 said second visualization device;
14 calculating a first subset of said process data, said first subset comprising
15 values present in said ROI;
16 receiving a second selection of at least one of said plurality of regions of
17 interest (ROI), said second selection from at least one dimension chosen from among said
18 three dimensions, said second selection indicated on at least one of said first visualization
19 device and said second visualization device;
20 calculating a second subset of said process data, said second subset
21 comprising values present in said second selection of at least one of said plurality of
22 regions of interest along at least one of said three dimensions;
23 applying a function to said first subset of said process data and said second
24 subset of said process data, yielding a third subset of said process data; and
25 displaying said third subset of said process data together using at least one
26 of said first visualization device and said second visualization device,
27 said third subset of said process data displayed using at least one of a
28 plurality of different colors, a plurality of different intensities of a color, a plurality of
29 different intensities of a plurality of different colors.